

Appl. No. 10/065,768
Amtd. dated May 19, 2005
Reply to Office action of February 23, 2005

AMENDMENTS TO THE SPECIFICATION

Please replace the original title with the following new title:

- 5 METHOD OF COMBINING NEWLY ESTABLISHED ENTRIES WITH ORIGINAL
ENTRIES FOR UPDATING A DEFECT TABLE WHEN AN OPTICAL DISC DRIVE
STOPS WRITING DATA INTO AN OPTICAL DISC

Please replace the paragraph [0036] with the following amended paragraph:

- 10 [0036] Please refer to Fig.5, which illustrates a typical optical disc drive 30. The present invention is applicable to the optical disc drive 30, as illustrated in Fig.5, to manage a DT on the optical disc 22. The optical disc drive 30 comprises a holder plate 34, a motor 32 that drives the holder plate 34, a read/write head 36 that accesses data on optical disc, a control circuit 38 that manages the operation of the optical disc drive 30, and a memory 40 that provides temporary storage for the control circuit 38 to perform operations on related data. The read/write head 36 of the optical disc drive 30 is capable of detecting a defect on the optical disc 22 during data write-in.

- 20 Please replace the paragraph [0038] with the following amended paragraph:

- [0038] Please refer to Fig.6 (in conjunction with both Fig.2A, Fig.2B and related elaborations), which ~~illustrate~~ illustrates how the present invention temporarily stores the DT (of Fig.2B) in the memory 40 of the optical disc drive 30. Unlike the prior art technology, this method first allocates three memory areas ~~are allocated~~: (Z2 as the 2nd memory area and Z3 as the 3rd memory, with Z1 further divided into Z1a, Z1b, and Z1c) in the memory 40 prior to loading and temporarily storing the DT. The memory areas Z1a,

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Z1b, and Z1c, along with Z2 and Z3 comprise a plurality of first memory blocks, as M1a in Z1a, M1b in Z1b, and M1c in Z1c. Each of the memory blocks M2 and M3 is utilized to temporary store a DT entry.

- 5 Please replace the paragraph [0039] with the following amended paragraph:

[0039] When the optical disc drive 30 reads the DT of the optical disc 22 into the memory 40, used-entries in every DTB (those with a status indicator "U") are stored in the first corresponding blocks of M1a in Z1a. Similarly, unused entries in every DTB (those with
10 a status indicator "F") are stored in the corresponding blocks of M1b in Z1b, and all unusable entries in every DTB are stored in the corresponding blocks of M1c in Z1c. Comparing the DT of Fig.2B with the entries temporarily stored in various memory blocks (as illustrated in Fig.6), the prior art used entries in DTB(n-i),DTB(n), and DTB(n+1), comprising data block addresses of DN1,DN2,DN6,DN7, DN8 to DN11, and
15 DN12, are all stored in the memory area Z1a. Unusable entries in every DTB are all stored together in the memory area Z1c and comprise the defective replacement data block addresses of AN3, AN4 to AN16, and AN18. In a real case scenario, the present invention is capable of directly reading every used-entry in the DT ~~onto~~ into the memory area Z1a. Since used-entries in the DT are sorted, it remains sorted after being read into
20 memory area Z1a.